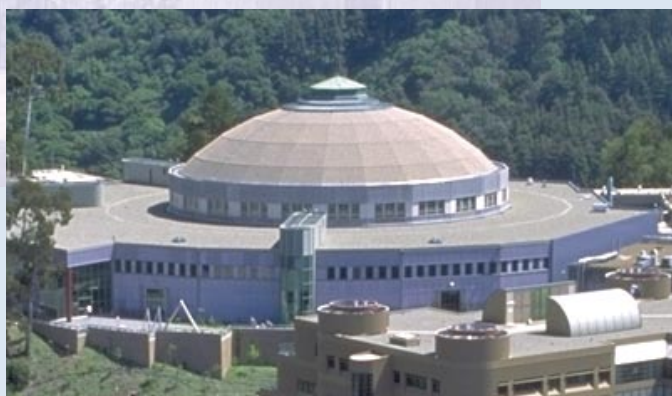
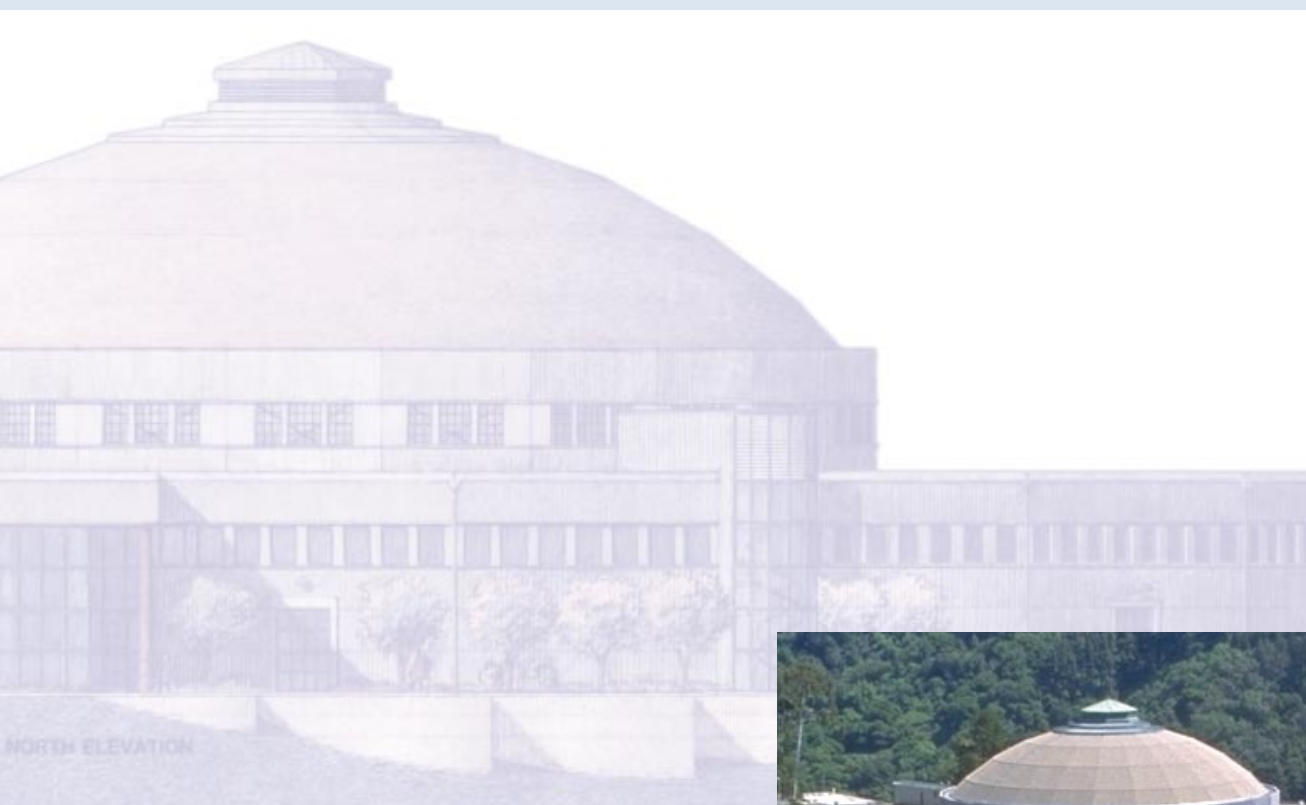


ADVANCED LIGHT SOURCE



ACTIVITY REPORT 1996/97

SEPTEMBER 1997

Ernest Orlando Lawrence Berkeley National Laboratory
University of California • Berkeley, California 94720

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Ten years ago, the Advanced Light Source (ALS) existed as a set of drawings, calculations, and ideas. Four years ago, it stored an electron beam for the first time. Today, the ALS has moved from those ideas and beginnings to a robust, third-generation synchrotron user facility, with eighteen beamlines in use, many more in planning or construction phases, and hundreds of users from around the world.

Progress from concepts to realities is continuous as our scientific program, already strong in many diverse areas, moves in new directions to meet the needs of researchers into the next century. ALS staff members who develop and maintain the infrastructure for this research are similarly unwilling to rest on their laurels. As a result, the quality of the photon beams we deliver, as well as the support we provide to users, continues to improve.

The ALS Activity Report is designed to share the results of these efforts in an accessible form for a broad audience. The Scientific Program section, while not comprehensive, shares the breadth, variety, and interest of recent research at the ALS. (Our *Compendium of User Abstracts and Technical Reports* provides a more comprehensive and more technical view.) The Facility Report highlights progress in operations, ongoing accelerator research and development, and beamline instrumentation efforts. Although these Activity Report sections are separate, in practice the achievements of staff and users at the ALS are inseparable. User-staff collaboration is essential as we strive to meet the needs of the user community and to continue the ALS's success as a premier research facility.

